Does Tablet KTU 1.78 provide ‘independent scientific confirmation of the New Chronology’?

An impressive feature of David Rohl’s New Chronology is the way in which it appears to be confirmed by astronomical retrocalculations. In A Test of Time (Pharaohs and Kings), particularly strong claims are made for a small tablet from Ras Shamra (ancient Ugarit) known as KTU 1.78. Rohl understands the tablet to refer to a solar eclipse which occurred in the reign of Nikmaddu II of Ugarit, and this is used to provide a peg for the reign of Akhenaten, Nikmaddu’s contemporary on the throne of Egypt. In this paper I aim to show that Rohl’s argument is not supported by the evidence.

JOHN J. BIMSON

The contents of KTU 1.78

Tablet KTU 1.78 (also known as RS 12.61), was unearthed in 1948 and is now kept in the Museum of Antiquities in Damascus. It bears two short texts, one on each side. The language is Ugaritic, and the script is alphabetic cuneiform, an invention of Ugarit’s scribes. As translated by W. H. van Soldt, the text on the obverse reads:

On the ... day of the new moon in (the month) hiyarum the Sun went down, its gate-keeper was Rshp.

And on the reverse:

Two lives were examined: danger.

Both texts contain several enigmas. In this article we cannot discuss all the translation possibilities put forward by scholars during more than half a century of research. Only the main options will be mentioned.

The gap left by van Soldt at the beginning of the obverse text reflects uncertainty over the meaning of the very first word, bit. Some translators relate the word to a root well-attested in Ugaritic, Hebrew and Aramaic and meaning ‘be ashamed’. Thus J. F. A. Sawyer and F. R. Stephenson translate the first phrase as: ‘The day of the new moon in the month of Hiyar was put to shame’. They also find a likely biblical parallel in Isaiah 24:23, where the cognate verb bōsh is used: ‘Then the moon will be confounded, and the sun ashamed’.

Although the next phrase could simply mean that the sun set, Sawyer and Stephenson suggest it is a circumlocution for a solar eclipse, and render it: ‘The Sun went down (in the day-time)’ — i.e., day turned unexpectedly into night. These scholars were the first to argue that the text refers to a solar eclipse, and they identified it with an eclipse observable from Ugarit on 3rd May 1375 BC.

An alternative view takes bit to be bit, the Ugaritic word for ‘six’, with the preposition b’(in ‘on’). But if the meaning is ‘on the sixth day of (i.e., after) the new moon’, this excludes reference to a solar eclipse, which can only occur at new moon (specifically when earth, moon and sun are aligned). In fact, as we shall see below, some scholars do not accept that the text refers to an eclipse at all. However, van Soldt tentatively suggests we have here a reference to the sixth hour of the day in question. This in turn would rule out a straightforward reference to sunset in the next clause, and van Soldt, like Sawyer and Stephenson, interprets ‘the sun went down’ as a reference to the sudden onset of darkness caused by a total eclipse. On this view the term bit provides valuable information about the time of day when the eclipse occurred. In fact T. de Jong and van Soldt identify the eclipse with one that was visible from Ugarit on 3rd

John Bimson is the author of Redating the Exodus and Conquest (Sheffield, JSOT Press, 1978; 2nd edition, 1981). He is a lecturer in Old Testament Studies at Trinity College, Bristol, and an ISIS Research Associate specialising in the chronology and stratigraphy of ancient Israel. Dr Bimson was awarded the 1986 Institute Fellowship for his PhD research into the archaeology of the Conquest.

JACF VOL. 10

57
March 1223 BC, and they point out that if Ugarit followed the Egyptian practice of dividing the time from sunrise to sunset into ten hours, the suggested translation of *ḥt* as “sixth hour” gains credibility because the eclipse took place at 13h20m, whereas sunrise and sunset occurred at 6h45m and 17h45m Local Mean Time, respectively.

This suggestion does not solve all the problems relating to *ḥt*. For “sixth hour” we would expect the Ugaritic scribe to have used *ṭt*, the ordinal number “sixth”, not *ḥt*, the cardinal number “six”. Nevertheless, a majority of translators find “six” to be the most logical interpretation of *ḥt*. D. Pardee’s solution is to translate the phrase *ḥt ym* as ‘during six days’, or ‘six days in a row’.

This interpretation would naturally rule out an eclipse, and Pardee believes the text actually refers to six consecutive observations of a heliacal setting of Mars (the usual identification of *Rṣḥp*, on which see further below). Wyatt, however, points out that while ordinal numbers were used in Ugaritic for days of the month, evidence is lacking on how hours of the day were numbered, and so we cannot completely rule out the use of *ḥt* for this purpose.

Another debated matter is the timing of the month Hiyaru (or Hiyar). Sawyer and Stephenson assumed that it was equivalent to the Babylonian month Ajiaru (or Aaria) and Hebrew Iyar, and therefore “corresponded approximately to April-May”. However, de Jong and van Soldt, using a text not previously taken into account in research on Ugarit’s calendar (RS 25.455), conclude that Hiyar could be the sixth lunar month of a year which began in the autumn, and that it probably corresponded to February/March. ‘Apparently, the month *hiyar* has nothing to do with the Babylonian *ajiaru*, as was previously suggested. In fact these months are two months apart.’

In determining when the year began in the Ugaritic calendar, de Jong and van Soldt follow the work of J. C. de Moor, who argues that the first month of the cylic year was the one known as *ršk ym*, and that it began on the new moon nearest to the autumnal equinox. In terms of our calendar, it would have fallen around September/October. De Moor’s conclusion has been widely accepted, but is now challenged by Pardee, who suggests that *ršk ym* was in fact the last month of the year at Ugarit, not the first. On the other hand, Pardee accepts that the year began in September/October, and that de Jong and van Soldt have correctly reconstructed the sequence of months. The result is that Hiyar became the fifth month instead of the sixth, and corresponds to January/February.

This earlier placement of Hiyar would rule out de Jong and van Soldt’s view that KTU 1.78 records the eclipse which occurred on 5th March 1223 BC. As noted above, Pardee does not think the text records an eclipse at all, so he has no interest in finding an alternative candidate. However, M. Dietrich and O. Lorezt, adopting Pardee’s refinement of Ugarit’s calendar, have proposed an eclipse that was visible from Ugarit on 21st January 1192 BC, shortly before the city’s final destruction. But it should be noted that Pardee himself offers his view of the calendar with due caution and does not completely exclude the possibility that Hiyar corresponded to February/March.

The most widely accepted interpretation of the name *Rṣḥp* (Rashap or Reshep) is that it refers to the planet Mars. Two texts, listing Ugaritic deities with their Akkadian equivalents, agree in equating Rashap with the Mesopotamian Nergal. Nergal is in turn attested as a name for the planet Mars in a number of Mesopotamian texts. ‘The meaning of the last phrase would therefore seem to be that Marduk was seen in some significant position during the eclipse.’

Uncertainties also plague the translation of the few words on the reverse of the tablet, but as this text is less crucial to Rohl’s argument I will not go into details here. Pardee summarises the two main options: ‘The two lines on the reverse of the tablet are epigraphically uncertain, and it is unclear whether livers are being consulted... or whether the men of the city are seeking out the governor...’. The majority of translators believe these lines refer to extispicy, i.e., an act of divination that involved sacrificing animals and examining their entrails.

**David Rohl’s interpretation of KTU 1.78**

David Rohl adopts the following translation of KTU 1.78:

> The day of the new moon of Hiyar was put to shame as the sun (goddess) set, with Rashap as her gate-keeper.
> Two livers examined: danger!

Like Sawyer and Stephenson, he takes ‘The day... was put to shame’ to refer to an eclipse, but he differs from them, and from de Jong and van Soldt, in taking literally the reference to the sun setting. In other words, he believes the second phrase indicates that the eclipse occurred just before sunset. As for the month Hiyar, he follows Sawyer and Stephenson and states that it was ‘the equivalent in the Julian calendar of mid-April to mid-May’. After spelling out the conditions required by this interpretation, Rohl concludes:
A total eclipse which took place in April/May and specifically during the last hour of daylight at Ugarit must therefore have been quite exceptional and probably unique within historical time. So we have an excellent opportunity to pinpoint exactly [by astronomical retrocalculation] the event described in tablet KTU 1.78.18

Drawing on earlier research by Wayne Mitchell,19 he identifies the event with an eclipse visible from Ugarit ‘at precisely 6:09 pm on the 9th of May 1012 BC – just thirty minutes before the sun set’.20

Other evidence apparently enables Rohrl to use this eclipse of 1012 BC to corroborate his New Chronology dates for Egypt’s 18th Dynasty. He points out that Amarna Letter EA 154 was written to Akhenaten by Abimilk, king of Tyre, reporting a fire at Ugarit that destroyed half of the royal palace. He states that with the aid of related correspondences we can date this letter ‘soon after Akhenaten had become senior monarch in his twelfth year, when Nikmadu was ruler of Ugarit’.21 He also points out that KTU 1.78 was found blackened by fire, and he assumes that this was the same fire reported in EA 154. This assumption enables him to argue as follows:

As the burning of the palace following the omen [i.e., the eclipse] occurred very soon after the death of Amenhotep III, we can then produce an absolute date for the last year of the old king’s reign and therefore also the twelfth year of Akhenaten who, having recently become senior monarch, received news of the palace’s destruction from Abimilk of Tyre.22

With the date of the eclipse established by retrocalculation, he triumphantly concludes:

This new astronomical date was the independent scientific confirmation of the New Chronology which I had been waiting for. For I could now anchor the twelfth year of Akhenaten ... securely to within a year of the astronomically derived absolute date of 1012 BC. Astronomical research has not only supported the New Chronology’s dates for the late 18th Dynasty but has refined the absolute dating to within a single year.23

This is a bold claim and it deserves close examination.

Examining Rohrl’s interpretation

Rohrl’s chain of logic can be challenged at several points, some of which will already be obvious. As noted above, not all translators of KTU 1.78 accept that the tablet refers to an eclipse. If they are right, Rohrl’s argument does not even begin to get off the ground. On the other hand, the case for an eclipse is at least superficially reasonable, and I will assume for the sake of argument that it is correct.

However, this by no means ends the uncertainties. Did the eclipse occur at sunset? Rohrl is not alone in thinking so, but we have seen that by no means all interpreters of the tablet accept this. More crucially, there is now a consensus that the month Hiyyar fell earlier than April-May. If it was really equivalent to February/March (de Jong and van Soldt), or even January/February (Pardee, Dietrich and Lorentz), we are forced to seek another candidate for the eclipse referred to on the tablet.

It is also worth noting the difficulties Rohrl encounters in identifying Rasaph. In A Test of Time (Pharaohs and Kings), he suggests that Rasaph was ‘a giant star which would explode so violently some two thousand years later’ to form the Crab Nebula; ‘Small wonder that we can no longer identify this ancient deity’s celestial form – it no longer exists.’24 This sounds ingenious, but the Crab Nebula is in fact in the constellation Taurus, whereas Mitchell’s retrocalculations place the sun in Orion at the time of the 1012 BC eclipse. Rohrl evidently confused the Crab Nebula with the Orion Nebula. The latter, far from being the remains of an exploded star, is in fact a ‘star factory’, and cannot provide us with a candidate for Rasaph. In The Lost Testament: From Eden to Exile, Rohrl has dropped the Crab Nebula theory and instead suggests that Rasaph may simply have been a name for the constellation of Orion.25 There is no textual support for this suggestion, and it ignores the evidence that Rasaph was Mars.

But let us make a further concession and assume that, notwithstanding the uncertainties and difficulties, KTU 1.78 does record the eclipse that was observable from Ugarit on the evening of the 9th of May 1012 BC. There is still a huge flaw in Rohrl’s reasoning, as we shall now see.

No evidence for a date in the Amarna period

David Rohrl’s case for using this eclipse to date the 12th year of Akhenaten depends on the tablet having been written during the reign of Akhenaten’s contemporary, Nikmadu II of Ugarit. Is there any evidence for this? The tablet itself bears no introduction or colophon to indicate in whose reign it was written. For the attribution to Nikmadu II, Rohrl refers his readers to Sawyer and Stephenson. ‘However, their argument is far from persuasive. They write:

The text was probably written during the early years of the long and relatively well-documented reign of Nqmad [Nikmadu] II (died 1345 B.C.). From c. 1370, when Ugarit came under the protective influence of the great Hititie king Suppiliuas I (1380-1346 B.C.)... there was a flowering of artistic and literary activity at Ugarit, and much of the extant literature was almost certainly composed, or at any rate copied, at this time.26

They argue that the earliest possible date for the tablet is provided by a fire which destroyed the whole city of Ugarit, including the royal palace, around the start of Nikmadu II’s reign. C. F. A. Schaeffer, director of excavations at Ugarit from 1929 to 1970, dated this destruction no earlier than c. 1375 BC, so Sawyer and Stephenson write: ‘In that case, 1375 B.C. would be a firm terminus a quo for the Ugaritic texts stored in the royal palace at Ugarit.’27 More recent
scholarship dates this fire c. 1360/1350 BC (in line with the later dates now favoured for the kings of Hatti and Ugarit), but otherwise agrees that the surviving royal archives all postdate the catastrophe.

However, while this reasoning rules out a date earlier than Nikmaddu II’s reign for KTU 1.78, it does not eliminate a later date. As we will see below, scribal activity continued throughout the final phase of the Late Bronze Age at Ugarit (c. 1350-1175 BC in the conventional chronology). It is striking that Sawyer and Stephenson offer no arguments against a later date. Ironically, their most objective piece of evidence for dating the tablet to the reign of Nikmaddu II was their retrocalculation of the eclipse to 1375 BC. Since they dated Nikmaddu II c. 1375-1345 BC, this eclipse seemed to fall neatly at the start of his reign. However, it does not fall within the dates currently favoured for Nikmaddu II (c. 1350-1330 BC), and, of course, is nowhere close to Nikmaddu’s reign in David Rohl’s New Chronology. In other words, both conventional and revisionist scholars have discarded the only substantive argument that was ever offered for dating this tablet to the reign of Nikmaddu II.

But what of Rohl’s claim that KTU 1.78 was “blackened by the disastrous fire which struck the “Western Archive”’, and his assumption that this was the same fire mentioned in Amarna Letter EA 151? The tablet is indeed blackened by fire, but there is absolutely no evidence that this happened in the time of Nikmaddu II. The theory that the Western Archive was destroyed by the fire reported in Abimilku’s letter was first put forward by Schaeffer in 1936, and he maintained it until the early 1950s. As the excavations progressed it became clear that the destruction of the Western Archive had been part of a much more widespread catastrophe in which not only the whole palace but the city itself had been destroyed. These circumstances did not fit Abimilku’s report of a fire that destroyed only half of Nikmaddu’s palace. The theory also ‘ran into serious trouble when more and more texts from the 13th century were discovered. Schaeffer then proposed a new theory, that another calamity in the form of an earthquake hit the city; later on, new finds proved that this “second” destruction was to be placed at the end of Ugari’s existence and that all tablets came from the last habitation level, V/3....’

This situation had become clear by 1974. The flames that blackened KTU 1.78 were those of Ugari’s final destruction.

Evidence for a later date

Two lines of argument suggest that KTU 1.78 was written much later than the time of Nikmaddu II.

The length of time for which different genres of texts were preserved in the archives at Ugarit has been studied by a number of scholars, who ‘have come to more or less the same conclusion’: that tablets containing juridical agreements and international treaties ‘were consciously kept for many generations’, while other texts were considered more ephemeral and were disposed of.

The other genres (letters, economic texts, school texts) – as far as they can be dated – are only represented by texts dating to the last ca. 75 years of Ugarit’s existence (1250-1175). Since KTU 1.78 does not belong to the group of legal texts and treaties, a date roughly in the second half of the 13th century or the first quarter of the 12th century is likely.

Whatever chronology we adopt for Ugari, Nikmaddu II reigned almost a century before the start of this 75-year period.

In support of Rohl’s treatment of KTU 1.78 it might be argued that, because the tablet records an unusual event, it could have been preserved for much longer than other texts. In fact, because the tablet has no parallels in the Ugarit archives, we have no idea how this type of text would have been regarded as time went by. However, as the text itself does not record any response to the ‘danger’ that was discerned by extispicy, or its outcome, it is difficult to see what relevance it could have had for future generations.

The script in which KTU 1.78 is written may also indicate an origin later than the time of Nikmaddu II. As noted earlier, the tablet is written in the alphabetic cuneiform script peculiar to Ugari. Some scholars have recently concluded that this script was in use for no more than the last century of Ugarit’s existence, and probably much less. In other words, its invention post-dated the reign of Nikmaddu II. If this theory is correct, the only way the contents of KTU 1.78 could have originated during Nikmaddu II’s reign is if they had been transcribed onto that tablet at a later date, using the new script. But the nature of the inscription itself makes this highly improbable. As Dietrich and Lorez have pointed out, the cuneiform script of KTU 1.78 is not the neat, precise work typical of the palace scribes. Rather, it appears to have been hurriedly executed, suggesting a spontaneous note made at the time of the event. It is therefore very unlikely to be a scribal copy made with the intention of preserving the text.

The important point is this: even if we could argue for the long-term preservation of KTU 1.78 (or at least its contents) by Ugari’s archivists, we would still have no evidence for dating its origin specifically to the time of Nikmaddu II.

In other words, there is no way of sustaining the link on which David Rohl’s argument depends. We simply do not know in whose reign this text was produced. This renders it useless for establishing an absolute date for any king, of Ugari or of Egypt.

Conclusion

David Rohl’s argument based on KTU 1.78 is fatally flawed. He accepted the dating of KTU 1.78 to the reign of Nikmaddu II, but combined this with an alternative retrocalculation, placing the eclipse in 1012 BC. He then argued that this supported a revised date for Nikmaddu II and thus for his contemporary Akhenaten. But he overlooked the fact that it was only within the conventional chronology that anything like objective evidence could be produced.
for dating the tablet to the time of Nikmaddu - namely the
eclipse of 1375 BC! With the loss of that evidence there is
no case for linking the tablet to Nikmaddu's reign. In fact
there are good grounds for thinking the dates from
much later in Ugarit's history.
In short, there is no basis for David Rohl's claim that
KTU 1.78 enables us to 'produce an absolute date for ...'
the twelfth year of Akhenaten'.
This conclusion does have a positive aspect, as it will allow Rohl to consider later dates for the 18th and 19th Dynasties, as I believe are demanded by both genealogical and stratigraphical evidence.
If KTU 1.78 records an eclipse and, if that eclipse can
date to 1012 BC, it would still have some value as a
challenge to the orthodox chronology, for it would show
that the city of Ugarit was flourishing at least 150 years after
the conventional date for its destruction. However, we have
seen that the date of 1012 BC is now unlikely to be correct.
On the other hand, the dates proposed within the orthodox
chronology also have their problems. The search for
an alternative candidate within a revised chronology is
already in progress and may prove fruitful, though the table
can never provide absolute dates for a particular king's reign.
Of course the most fundamental question is whether
KTU 1.78 records a solar eclipse at all. Given the many
uncertainties surrounding the translation and interpretation
of this brief text, we will probably never know for sure.

Notes
1. The tablet was first published by C. Virolegaud, 'Les Nouvelles Tablettes de Ras Shamra', Syria 28 (1951), pp. 25-27. Although generally assumed to have come from what is now known as the Western Archive, the tablet was found outside the archive proper. The Western Archive consisted of four rooms of the Royal Palace, numbered 2, 3, 4 and 5 on the excavation plans. South of Room 2 and connecting with it was Room 1, and it was here (in a doorway connecting this room with the Western Entrance of the Palace) that KTU 1.78 was found. It was one of several tablets found scattered around the area of the Western Entrance. For details see W. H. van Soldt, Studier i den Akkadiske af Ugarit. Datoing og Grammatik (Aalter Orientale og Altes Testament 8) (Koeverlaan, Neukirchen-Vluyn, 1991), pp. 49-60. Note that Room 1 is not the room arrowed in David Rohl's A Test of Time: The Bible - From Myth to History (London, Century, 1995), p. 230: this is Room 5 of the Western Archive. Room 1 lies outside the large paved area visible to the right of this in the photograph.
5. See e.g. J. A. Wagenaar, 'In the Sixth Day of the Month: the New Moon of Hiyaru', Ugarit Forschungen 34 (2002), p. 914.
original French: 9h et 9h 30 signifie donc 9h30/45, ou 9h 30/45.
7. A. Wagenaar, et al., 'Le calendrier d'Ougarit', Ougaritica 2 (1965), p. 420. For a possible objection see J. A. Wagenaar, op. cit. [3], p. 915, n. 11. The translation 'During the six days... was previously adopted by C. Virolegaud, op. cit. [1], and J. Gray, 'Royal Substitution in the Ancient Near East', Palestine Exploration Quarterly 87 (1955), p. 182.
8. D. Pardee, op. cit. [6]; also D. Pardee and N. Swerdlow, 'Not the earliest solar eclipse', Nature 333 (1988), p. 406. Note that while de Jong and van Soldt strongly defend the eclipse interpretation, they also say: However, reference to a more common phenomenon like e.g. the helical setting of Mars - often recorded in Babylonian texts - cannot be excluded. They add in a footnote: This interpretation is the one preferred by both H. Hunger and C.G.B. Walker (private communication). (T. de Jong and W. H. van Soldt, Redating an Early Solar Eclipse Record (KTU 1.78): Implications for the Ugaritic Calendar and for the Secular Accelerations of the Earth and Moon', Jahrbücher für die Vorschriftsprachige Ägyptologie und Vorderasiatische Archäologie, LK 30 (1991), p. 69 with note 7). A non-eclipse interpretation was also adopted by J. Gray, op. cit. [6], though Gray thought Rohl was Venus in this context.
9. In defence of Rohl as a possible designation for a hour of the day, Wyatt compares the Jewish usage '6:30 hours, at six o'clock' (op. cit. [2], p. 367), J. Topper, Ugaritische Grammatik = AOAT 237 (Münster, 2000), pp. 385-386, argues that cardinal numbers could be used in Ugaritic as 'Kollektivzahlen' with the force of ordinals, allowing the translation: On the sixth day after new moon... As already noted, this would rule out an eclipse. J. A. Wagenaar, op. cit. [3], suggests the clause should be rendered: In month six: the day of the "new moon" of Hiyaru...'. Pointing out that de Jong and van Soldt's reconstruction of the Ugaritic calendar, Hiyaru is indeed the sixth month of the year. However, as we will see below, Hiyaru may actually be the fifth month. In any case it would seem superfluous to give the number of the month well in advance.
15. T. de Jong and W. H. van Soldt believe this condition is met by the eclipse of 1223 BC, when Mars was close to the eclipsed sun. However, Mars would have been exactly opposite the earth and therefore in its period of invisibility (Wayne Mitchell, personal communication 04.08.2005). During the eclipse of 1375 BC Mars was not even above the horizon (de Jong and van Soldt, op. cit. [7], p. 73). Sawyer and Stephenson therefore suggest that during that eclipse the star Aldebaran was mistaken for the sun because of its red color. J. A. Wagenaar, op. cit. [5], p. 471. This seems unlikely as Aldebaran would surely have been recognised from its position relative to other stars. Dietrich and Loretz, op. cit. [13], do not discuss the position of Mars during the eclipse of 1292 BC, but in fact it would not have been visible (I am grateful to Richard Abbott for undertaking the research to establish this). An alternative to Mars being close to the sun is that it was close to the horizon, since Nergal was 'lord of the Underworld' (D. Brown, op. cit. [14], p. 36), this may well be the position signified by the term 'gate-keeper' in KTU 1.78.
17. D. M. Rohrl, op. cit. [1], pp. 237-238. As Rohrl points out (p. 417, note 4 to chapter 11) this translation is from Wayne Mitchell (see below, n. 19), who in turn relies on Sawyer and Stephenson except for the clauses referring to the sun setting.
18. Ibid., p. 239.
20. D. M. Rohrl, op. cit. [1], p. 239.
22. Ibid., p. 240.
23. Ibid., p. 240.
24. Eg. W. A. Mitchell, op. cit. [19], pp. 18-20. J. Gray, The Legacy of Canaan, 2nd ed. (Leiden, Brill, 1966), p. 154, also translates the second phrase as 'the Sun setting'. But he does not accept the eclipse interpretation. Cf. Walker, op. cit. [14], p. 204: 'As far sight the next refers to an event occurring at the moon's.'
25. See also N. Wyatt, op. cit. [2], p. 307, who points out that the difficult term might mean 'was delayed'. 'This would mean that any putative eclipse took place at dusk.' Cf. F. T. Sawyer and F. R. Stephenson, op. cit. [1], p. 470.
26. D. M. Rohrl, op. cit. [1], p. 239, and see fig. 271 on p. 240. Rohrl's reference to Rashap exploding 'some two thousand years later' reflects the common view that a bright object observed by Chinese astronomers in 1254 AD was a supernova which gave rise to the Crab Nebula as seen today. (But for doubts about this connection see H. Pong-Yoke et al., 'The Chinese Guest Star of A.D. 1054 and the Crab Nebula', Vistas in Astronomy 13 (1969), pp. 1-13). Specifically speaking, however, the supernova exploded did not occur 'some two thousand years later', as 1054 AD was simply the time when it was observed from Earth. The explosion must actually have occurred around 5000 BC, the Crab Nebula being over 6000 light years distant (P. Moore, The Star of Bethlehem (Bath, Cantopus Publishing, 2001), p. 76).
29. Note that Mars may well have been visible during the eclipse of 10/2 BC, though this would not necessarily resolve the difficulty of identifying Rashap in the context of that eclipse. See W. A. Mitchell, op. cit. [19], p. 209, where figure 7a shows Mars, Jupiter and Mercury close together above the eclipsed sun. In the caption to Figure 7 Mitchell suggests that this triple conjunction may have been the phenomenon which the ancient observers identified with Rashap. He does not say why he rejects the usual identification of Rashap with Mars, but it would certainly be odd if, of these three planets, Mars alone had been singled out for mention on the tablet. In an email to the online New Chronology discussion list, dated 15th June 2008, Mitchell dissociated himself from Rohrl's supernova theory.
30. See D. M. Rohrl, op. cit. [1], p. 417, note 1 to chapter 11: 'For a dating to the reign of Nimrud II and therefore to early Akkadian see. J. F. Sawyer & F. R. Stephenson, 1970, p. 469.' Note however that the page number is an error for p. 474.
31. Sawyer and Stephenson, op. cit. [3], p. 474.
32. Ibid., pp. 474. Sawyer and Stephenson distinguish this fire from the partial destruction of the royal palace reported in Amarna Letter EA 351, an event which they date about ten years later.
34. See W. H. van Soldt, op. cit. [1], p. 46, n. 40 for details of publications.
35. Ibid., p. 49, n. 20.
36. Ibid., p. 58, n. 40. Note that the Western Archive did produce evidence of a floor ('Floor I') earlier than the one in use at the time of the final destruction ('Floor II'), but the date of this earlier floor remains unknown. W. H. van Soldt comments: 'On the basis of the textual finds (the approximate dating of which is not contradicted by the pottery), it is, however, impossible to connect the possible destruction of this level - a more peaceful abandonment seems more likely - with any of the disasters known to have fallen upon Ugarit.' (Ibid., p. 58.)
40. The Western Archive, to which KTU 170 belonged, did contain one document which originated in the reign of Nimrud II, namely an Ug-